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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,284	03/05/2002	Duncan Roger Harper	10660-070US (10279P1)	5606
7590 09/22/2005 Frederick H. Rabin Fish & Richardson P.C. 225 Franklin Street Boston, MA 02110			EXAMINER METZMAIER, DANIEL S	
			ART UNIT 1712	PAPER NUMBER

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/091,284

Applicant(s)

HARPER ET AL.

Examiner

Daniel S. Metzmaier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17-30 and 32-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-30 and 32-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

Claims 17-30 and 32-36 are pending.

#### ***Specification***

1. The disclosure is objected to because of the following informalities: the specification contains trademarks. They should be capitalized wherever they appear and be accompanied by the generic terminology (such as after the first occurrence). Examples are Teric 12A2 and Teric 17A2.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 17-30 and 32-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The components of applicants claims overlap. It is unclear how much of a material reading on multiple components of the claim should be attributed to the claimed concentrations. It is unclear what are the metes and bounds of the claims due to the muticomponent overlap with the specified concentrations.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 17-19, 25-30 and 32-36 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bassam et al. 5,849,264. The claims of Bassam et al. refer to an insecticidal composition in the form of water-in-oil emulsion comprising (a) 2-80% w/w propellant, (b) 0.5-8% w/w of

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one more emulsifiers selected from di- and tri-sorbitan esters, polyglycerol esters, etc., (c) 1-20% w/w of a solvent selected from carboxylic acid (e.g. fatty acids column 3, lines 65-67), (d) 0.001-5% w/w of a pyrethroid insecticide and (e) water bring the total composition to 100% w/w. Component (d) comprises carboxylic acids and diethyl orthophthalate as well. The solvents of Bassam et al. are selected from fatty acid and dialkyl phthalates. Hence, as long as applicants such fatty acids cannot clearly and unambiguously demonstrate that will not fulfill the conductivity and phthalates criteria of the claims the compositions are deemed to be anticipated by Bassam et al.

Applicants set forth (paragraph [0056] of the original specification) the "compositions of the present invention, when sprayed through conventional aerosol spray heads, form droplets which are imparted with a unipolar charge of at least about  $\pm 1 \times 10^{-4}$  C/Kg". Since the compositions are anticipated and their use in conventional aerosol spray heads is disclosed, the methods as claimed are deemed anticipated.

To the extent the claims differ in the functional properties claimed, some variation of the compositions of the reference is disclosed and therefore some variation of the properties would have been expected. Applicants have not shown the properties to be critical to the invention.

8. Claims 17-19, 25-30 and 32-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Stopper 4,536,323, esp. column 4, line 34 - column 5, line 19, noting also column 3, line 55 - column 4, line 19. Sodium lauryl sulfate in the typical composition in column 4 would fulfill the conductivity criteria of claim 17 herein.

Applicants set forth (paragraph [0056] of the original specification) the “compositions of the present invention, when sprayed through conventional aerosol spray heads, form droplets which are imparted with a unipolar charge of at least about  $\pm 1 \times 10^{-4}$  C/Kg”. Since the compositions are anticipated and their use in conventional aerosol spray heads is disclosed, the methods as claimed are deemed anticipated.

To the extent the claims differ in the functional properties claimed, some variation of the compositions of the reference is disclosed and therefore some variation of the properties would have been expected. Applicants have not shown the properties to be critical to the invention.

9. Claims 17-30 and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fox et al., WO 99/21659, in view of Stopper 4,536,323, or Bassam et al. 5,849,264.

Fox et al describe an aerosol spray device and method of reducing the droplet size of a composition sprayed from such device. The preferred aerosol composition comprises an oil phase, an aqueous phase, a surfactant and a compressed propellant (page 8, lines 4-12). A charge is imparted to the liquid droplets solely by the interaction between the liquid within the aerosol spray device and the spray device itself as the liquid is sprayed therefrom (page 2, line 22 – page 3, line 22).

Fox et al differs in the particular emulsion compositions employed in the aerosol methods and the spray device of claims 21-24.

Bassam et al. refer to an insecticidal composition in the form of water-in-oil emulsion comprising (a) 2-80% w/w propellant, (b) 0.5-8% w/w of one more emulsifiers

selected from di- and tri-sorbitan esters, polyglycerol esters, etc., (c) 1-20% w/w of a solvent selected from carboxylic acid (e.g. fatty acids column 3, lines 65-67), (d) 0.001-5% w/w of a pyrethroid insecticide and (e) water bring the total composition to 100% w/w. Component (d) comprises carboxylic acids and diethyl orthophthalate as well.

Stopper, 4,536,323, esp. column 4, line 34 - column 5, line 19, noting also column 3, line 55 - column 4, line 19. Sodium lauryl sulfate in the typical composition in column 4 would fulfill the conductivity criteria of claim 17 herein.

Fox et al (page 7, line 32 et seq) discloses that changes in the product formulation can affect the charging levels. Fox et al further teaches that an emulsion of an immiscible hydrocarbon and water will carry a higher charge to mass ratio when sprayed from the aerosol device than either water or hydrocarbon alone.

These references are combinable because they teach aerosols and emulsions employed in said aerosols. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ the compositions of Bassam et al or Stopper in the aerosol devices of Fox et al (see page 4, lines 29 et seq) for the advantage of imparting a charge to said aerosol droplets, which has the effect of said droplets repelling each other, increased spread, and smaller droplet size of the aerosol.

Applicants set forth (paragraph [0056] of the original specification) the "compositions of the present invention, when sprayed through conventional aerosol spray heads, form droplets which are imparted with a unipolar charge of at least about  $\pm 1 \times 10^{-4}$  C/Kg". Since the compositions are anticipated and their use in conventional aerosol spray heads is disclosed, the methods as claimed are deemed anticipated.

To the extent the claims differ in the functional properties claimed, some variation of the compositions of the reference is disclosed and therefore some variation of the properties would have been expected. Applicants have not shown the properties to be critical to the invention.

***Response to Arguments***

10. Applicant's arguments filed June 27, 2005 have been fully considered but they are not persuasive.

11. Applicants (page 12) assert the trademarks are represented at paragraphs 0060, 0061, 0062, and 0148. Initially the specification only contains paragraphs 0001-0117. The examiner is unable to find the reference applicants make to the representation of trademarks in paragraphs 0060, 0061, 0062, and 0148.

12. Applicants (pages 14 and 15) assert the Balsam reference does not realize or disclose methods of enhancing the unipolar charge of aerosols, teaches the use of esters as solvents with paraffins and naphthenes. This has not been deemed persuasive since Balsam exemplifies paraffins as solvent (c) with esters of fatty acids as nonionic emulsifiers/surfactants (a) and (d(III)). Since the compositions are anticipated and the property of forming a unipolar charges aerosol is based on the compositions, it logically follows that the methods of aerosolizing in the prior art are anticipated by the prior art methods that employ compositions that are anticipated.

13. Applicants (pages 15 and 16) assert the Stopper et al reference does not realize or disclose methods of enhancing the unipolar charge of aerosols. This has not been deemed persuasive since Stopper et al teaches specifically hydrocarbon as solvent



including paraffins (c) anionic and nonionic emulsifiers/surfactants (a) and (d)(I)). Since the compositions are anticipated and the property of forming a unipolar charges aerosol is based on the compositions, it logically follows that the methods of aerosolizing in the prior art are anticipated by the prior art methods that employ compositions that are anticipated.

14. Applicants (page 16) assert Stopper et al lacks an exemplified use of all of the claimed components. Stopper et al (example) exemplified all the components with the exception of the solvent (d), which is instantly claimed as an optional component. Stopper et al (column 6, lines 49 et seq) further teaches substantially any water immiscible solvent may be employed for all or part of the methylene chloride including aliphatic hydrocarbons.

15. Applicants (pages 17 and 18) assert claim 24 has been amended to remove the components (d)(I) and thus the Stopper et al reference is no longer applicable. This has not been deemed persuasive since Stopper et al (column 5, lines 48 et seq; and column 6, lines 49 et seq) clearly disclose specific examples of obvious alternatives and/or functional equivalents for both the anionic surfactants of (d)(I) and the solvents reading on (d)(IV).

16. Applicants (page 18) assert they are not claiming the broad concept of changing the ratios to attain charged product but a specific combination. Said combinations are disclosed and known in the aerosol art. Their use in conventional aerosols is anticipated and/or obvious and would have been expected to inherently produce a unipolar charged aerosol as claimed.

***Conclusion***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

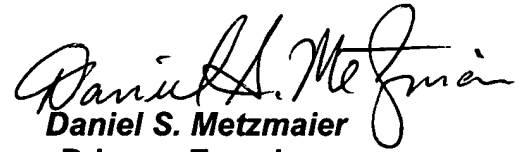
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on Monday to Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Daniel S. Metzmaier**  
**Primary Examiner**  
**Art Unit 1712**

DSM